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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/413,036	10/06/1999	ASIF D. GANDHI	2925-0344P	1429

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EXAMINER

DAVIS, TEMICA M

ART UNIT

PAPER NUMBER

2685

DATE MAILED: 06/19/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.
09/413,036

Applicant(s)
Ganghi et al.

Examiner
Temica M. Davis

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on Oct 6, 1999
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle* 35 C.D. 11; 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-38 is/are pending in the application
- 4a) Of the above, claim(s) _____ is/are withdrawn from consideration
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-38 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirements

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
*See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____ 6) ☐ Other: _____

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DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371© of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) do not apply to the examination of this application as the application being examined was not (1) filed on or after November 29, 2000, or (2) voluntarily published under 35 U.S.C. 122(b). Therefore, this application is examined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

2. Claims 1, 3, 13, 14, 16, 17, 19, 29, 31-33 and 36 are rejected under 35 U.S.C. 102(e) as being anticipated by Carlsson et al (Carlsson), U.S. Patent No. 6,167,240.

Regarding claims 1 and 17, Carlsson discloses a method/system for generating transmit power adjust commands in a wireless communications network comprising detecting interference conditions (col. 6, lines 20-34 and col. 8, lines 55-58); and generating power adjust commands in

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accordance with a system based power control operation when said detecting step detects an increased interference condition (col. 7, lines 1-21 and col. 8, lines 58-66).

Regarding claims 3 and 19, Carlsson discloses a method/system of claims 1 and 17, further comprising inherently generating power adjust commands for the mobile in accordance with an individual mobile-based power control operation when said detecting step does not detect an increased interference condition as evidenced by the fact that the base station in which the mobile station connects determines the appropriate transmitter power (col. 6, lines 1-4).

Regarding claims 13 and 29, Carlsson discloses a method/system of claims 1 and 17 wherein said detecting step monitors changes in total reverse link signal strength at the base station (col. 2, lines 23-33).

Regarding claims 14 and 32, Carlsson discloses a method/system of claims 1 and 17 and reads on wherein said detecting step monitors absolute total reverse link signal strength (col. 2, lines 23-33).

Regarding claims 16 and 31, Carlsson discloses a method/system of claims 1 and 17 wherein said detecting step monitors signal-to interference levels for a plurality of mobiles (col. 2, lines 34-44).

Regarding claims 33 and 36, Carlsson discloses a method/system for generating transmit power adjust commands in a wireless communications network comprising detecting interference conditions (col. 6, lines 20-24 and col. 8, lines 55-58); inherently selecting a first power control scheme when said detecting step does not detect an increased interference condition as evidenced

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by the fact that the base station in which the mobile station connects determines the appropriate transmitter power (col. 5, line 9-col. 6, line 4); selecting a second power control scheme when said detecting step detects an increased interference condition and generating power adjust commands based on the selected power control scheme (col. 6, lines 1-4, col. 8, lines 55-66).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 2, 10, 18, 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Carlsson.

Regarding claims 2 and 18, Carlsson discloses a method/system of claims 1 and 17 as described above.

Carlsson, however, fails to specifically disclose a method/system further comprising returning to a normal power control operation after the increased interference condition has eased.

The examiner contends, however, that this limitation would have been an obvious design choice.

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Therefore, at the time of invention, it would have been obvious to a person of ordinary skill in the art to modify Carlsson by returning the system to its normal power control operation after increased interference has ceased for the purpose of not wasting system resources when the system is in a "normal" state.

Regarding claims 10 and 26, Carlsson discloses a method/system of claims 1 and 17 as described above, and further discloses determining whether an increased interference condition has been detected (col. 6, lines 20-34 and col. 8, lines 55-58); and adjusting a parameter (transmitter power) of the system-based power control operation when said determining step indicates that an increased interference condition detected (col. 7, lines 1-21 and col. 8, lines 58-66).

Carlsson, however, fails to specifically disclose wherein said detecting step detects when the interference has persisted for a predetermined time period.

The examiner, however, contends that at the time of invention, that this limitation would have been obvious to a person of ordinary skill in the art, as it would have been a design choice based on desired system performance to determine how long interference has persisted in the system. Further, this limitation lacks criticality in view of the overall invention.

5. Claims 15 and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Carlsson and Padovani, U.S. Patent No. 6,192,249.

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Regarding claims 15 and 30, Carlsson discloses the method/system of claims 1 and 17 as described above.

Carlsson, however, fails to disclose wherein said detecting step monitors a ratio of power up-adjust commands to total power adjust commands.

Padovani reads on this limitation (col. 11, line 45-col. 12, line 57).

At the time of invention, it would have been obvious to a person of ordinary skill in the art to modify Carlsson with the teachings of Padovani for the purpose of monitoring the loading conditions of the system in order to further reduce or prevent interference (Padovani, col. 12, lines 47-58).

6.

Claims 4-9, 11, 12, 20-28, 24, 35, 37 and 38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Carlsson and Chheda et al (Chheda), U.S. Patent No. 6,181,738.

Regarding claims 4 and 20, Carlsson discloses the method/system of claims 1 and 17 as described above.

Carlsson, however, fails to disclose wherein said system-based power control operation includes comparing a signal-to-interference measurement for the mobile with a target signal-to-interference level for the mobile; generating a power down-adjust command when the signal-to interference measurement for the mobile is greater than the target signal to-interference level for the mobile; and determining whether to generate a power down-adjust command when

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the signal-to-interference measurement for the mobile is less than the target signal-to-interference level for the mobile.

Chheda discloses comparing a signal-to-interference measurement for the mobile with a target signal-to-interference level for the mobile (col. 2, lines 31-42); generating a power down-adjust command when the signal-to interference measurement for the mobile is greater than the target signal to-interference level for the mobile (col. 2, lines 54-57); and determining whether to generate a power adjust command when the signal-to-interference measurement for the mobile is less than the target signal-to-interference level for the mobile (col. 2, lines 54-57).

Although Chheda fails to disclose a power down adjust command when the signal-to-interference measurement for the mobile is less than the target signal-to-interference level for the mobile, Chheda does disclose that a power up or power down command is sent by the base station based on a comparison of measured signal to interference with target signal to interference. The examiner contends, however, that the decision to use a power up or down command would have been an obvious design choice based on desired system function.

Therefore, at the time of invention, it would have been obvious to a person of ordinary skill in the art to modify Carlsson with the teachings of Chheda for the purpose of maximizing reverse link performance when interference is present (Chheda, col. 2, lines 20-25).

Regarding claims 5 and 21, the combination of Carlsson and Chheda discloses the method/system of claims 4 and 20 and further discloses wherein said determining step determines whether to generate a power down-adjust command when the signal-to interference

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measurement for the mobile is less than the target signal-to interference level for the mobile based on a statistical probability (col. 6, lines 35-46 and col. 9, lines 39-67).

Regarding claims 6 and 22, Carlsson discloses the method/system of claims 1 and 17 as described above.

Carlsson, however, fails to disclose wherein said system-based power control operation includes generating a power adjust command based on a comparison of signal-to-interference measurement for the mobile and a target signal-to interference level for the mobile; judging whether an erasure frame has been received for the mobile; and determining whether to adjust the target signal-to-interference level for the mobile when an erasure frame has been received for the mobile.

Chheda reads on these limitations (col. 2, lines 52-57 and col. 2, line 64-col. 3, line 10).

At the time of invention, it would have been obvious to a person of ordinary skill in the art to modify Carlsson with the teachings of Chheda for the purpose of maximizing reverse link performance when interference is present (Chheda, col. 2, lines 20-25).

Regarding claims 7 and 23, the combination of Carlsson and Chheda discloses the method/system of claims 6 and 22 and further discloses wherein said determining step determines whether to adjust the target signal-to-interference level for the mobile when an erasure frame has been received for the mobile based on a statistical probability (Chheda, col. 2, lines 52-57, col. 2, line 64-col. 3, line 10 and col. 6, lines 35-46 and col. 9, lines 39-67).

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Regarding claims 8 and 24, the combination of Carlsson and Chheda discloses the method/system of claims 4 and 20 and further discloses wherein said system-based power control operation further includes judging whether an erasure frame has been received for the mobile; and determining whether to adjust the target signal-to-interference level for the mobile when an erasure frame has been received for the mobile (Chheda, col. 2, line 64-col. 3, line 18).

Regarding claims 9 and 25, Carlsson discloses the method/system of claims 1 and 17 as described above.

Carlsson, however, fails to disclose wherein said system-based power control operation further includes lowering a limit on how high target signal-to-interference levels may be increased during an outer loop power control operation.

Chheda reads on this limitation (col. 2, line 58-col. 3, line 18).

At the time of invention, it would have been obvious to a person of ordinary skill in the art to modify Carlsson with the teachings of Chheda for the purpose of maximizing reverse link performance when interference is present (Chheda, col. 2, lines 20-25).

Regarding claims 11 and 27, the combination of Carlsson and Chheda discloses the method/system of claims 5 and 21 and further discloses wherein the statistical probability is variable (col. 9, lines 39-50).

Regarding claims 12 and 28, the combination of Carlsson and Chheda discloses the method/system of claims 7 and 23 and further discloses wherein the statistical probability is variable (col. 9, lines 39-50).

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Regarding claims 34, 35, 37 and 38, Carlsson discloses the method/system of claims 33 and 36 as described above.

Carlsson, however, fails to disclose wherein the second power control scheme is a modified reverse inner loop or outer loop power control scheme.

Chheda discloses a power control system which utilizes a modified reverse inner and outer loop power control scheme (col. 3, lines 4-24).

At the time of invention, it would have been obvious to a person of ordinary skill in the art to modify Carlsson with the teachings of Chheda for the purpose of increasing system performance in the presence of interference or other conditions which can lessen system performance.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Kim, U.S. Patent No. 6,173,188, discloses power control using an erasure indicator bit.

Jalali et al, U.S. Patent No. 6,154,659, discloses a fast forward link power control CDMA system.

Tanoue, U.S. Patent No. 6,041,238, discloses channel assignment in a mobile system.

Mitra et al, U.S. Patent No. 5,732,328, discloses power control in wireless networks.

Hess et al, U.S. Patent No. 5,649,303, discloses interference reduction among systems.

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8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Temica M. Davis whose telephone number is (703) 306-5837. The examiner can normally be reached on Monday-Thursday from 7:30 am to 5:00 pm. The examiner can also be reached on alternate Fridays.

If attempts to reach the examiner are unsuccessful, the examiner's supervisor, Edward Urban, can be reached on (703) 305-4385.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to TC2600 Customer Service whose telephone number is (703)306-0377.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

or faxed to:

(703) 872-9314 (for any communications intended for entry).

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington. VA., Sixth Floor (Receptionist).



Temica M. Davis
June 14, 2002



EDWARD F. URBAN
SUPERVISORY PATENT EXAMINER
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